VEOLIA

September 22, 2015

Robert Kaplan
Deputy Regional Administrator
U.S. Environmental Protection Agency
77 W. Jackson Boulevard (C-14J)
Chicago, Illinois 60604

Dear Mr. Kaplan:

Thank you for the opportunity to meet with you and George Czerniak at your offices on August 11, 2015. Your proposal gave us much to think about.

As we understand it, USEPA's proposal to bring a resolution to the ongoing negotiations over Veolia's Part 71 Title V Permit consists of four basic points:

1. Implementation of the enhanced Feedstream Analysis Plan ("FAP");
2. Installation of carbon injection on Veolia incineration units 2 and 3;
3. Installation of high-efficiency particulate arrestance ("HEPA") filters at points after Veolia's baghouses; and
4. Installation of mercury Continuous Emission Monitor Systems ("CEMS") on each of Veolia's incineration units for the duration of the permit (5 years).

You propose that these conditions would be further refined through negotiations between technical personnel and would be included in a final Part 71 operating permit that Veolia would agree not to appeal.

As we expressed at the meeting, Veolia believes there is much in USEPA's proposal that we can agree on although, as we also related, Veolia has some concerns with the mercury CEMS and, in particular, the installation of HEPA filters at each of its units. However, it is Veolia's hope that these issues do not present insurmountable obstacles.

As demonstrated in Exhibit A to this letter, Veolia's mercury emissions are extremely small as compared to other mercury emissions sources in the St. Louis area. Moreover, Veolia already operates at a level where it emits less than 50% of the mercury limit established by the

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Hazardous Waste Combustor MACT. Veolia has never failed a comprehensive performance test ("CPT") and continues to exhibit outstanding performance during its CPTs—the latest occurring in late 2013. In short, we take compliance seriously and have consistently operated our equipment in a way that ensures superior performance and low emissions.

As we explained during the meeting, these facts make it difficult for Veolia to accept measures—including controls and monitors—that create the appearance that Veolia is doing something wrong. Our customers and community will take notice and these measures will hurt Veolia's reputation and profitability. This situation is particularly frustrating when our competitors that are also located in Region 5 (and beyond) are not being asked to install similar controls and monitors—even though these competitors have had violations and compliance problems, while Veolia has not. Still, Veolia recognizes and appreciates the Agency's willingness to work with Veolia to resolve the issues that have prevented a successful renewal of its Title V permit.

Thus, Veolia has discussed internally at length USEPA's proposal, and would like to suggest that USEPA consider the following points.

1. *Proposal for Enhanced FAP*

Veolia is in conceptual agreement with the Agency regarding the provisions of the enhanced FAP. Veolia is already performing many of the analyses featured in the enhanced FAP and will agree to implement the enhanced FAP as a part of its renewed Title V permit (subject to the conclusion of the discussions between technical personnel for Veolia and USEPA). Moreover, as you are aware, the technical personnel of Veolia and USEPA began addressing the enhanced FAP issues earlier this year and have already made progress towards a mutually acceptable final FAP. Specifically, there have been numerous productive discussions between Veolia and USEPA since our August 11th meeting.

2. *Proposal for Carbon Injection*

Veolia currently operates a carbon injection system at its unit 4 incinerator. Veolia voluntarily installed this carbon injection system on unit 4 over a decade ago to optimize compliance with the HWC MACT standards as part of its uniquely designed pollution control equipment. Like unit 4, Veolia's incineration units 2 and 3 use a dry-scrubbing pollution control system; however, the system is of a slightly different design, and, as a result, does not require carbon injection to meet the HWC MACT standards. Moreover, both units have demonstrated compliance with the HWC MACT emissions standards during multiple comprehensive and confirmatory performance tests.

Nevertheless, carbon injection is an accepted and proven technology for emissions reductions. As a result, Veolia is willing to install carbon injection on each of these units in an effort to reach an agreement with USEPA Region 5 concerning a final permit. This installation will result in $300,000 to $500,000 in capital expenditures and in ongoing annual operating, supply, and

carbon disposal costs of $100,000 to $200,000. Veolia will work with USEPA to obtain the necessary permits and approvals to install and operate the equipment. Once these approvals are secured, Veolia will be responsible for the tuning and operation of this equipment and will keep the Agency fully informed of Veolia's progress.

*3. Proposal for the Installation of HEPA filters*

When EPA proposed the installation of HEPA filters on all three incinerators during the August 11th meeting, Veolia representatives were unable to fully comment on the proposal as they had only limited knowledge of the HEPA technology. Needing an objective evaluation, Veolia retained the services of Amec Foster Wheeler ("AFW"). AFW is a highly respected engineering and consulting firm located in Utah that has extensive experience in incinerator design. Also, AFW is currently involved with designing and permitting the newest state-of-the-art hazardous waste incinerator in the country.

Veolia charged AFW with investigating the feasibility of installing HEPA filtration systems on the rotary kiln and both fixed hearth incinerators. The project included a site visit by AFW technical staff, an extensive analysis of Veolia's pollution control systems, and AFW providing their conclusions to Veolia in a final report. A copy of the AFW report is attached as Exhibit B. Among other factors, AFW's study considered Veolia's stack gas environment (e.g., gas flow, moisture, temperature, particulate matter characteristics, pressure); expected HEPA filter efficiency based on particle loading; upstream process operations and conditions which may affect the filtration system operation (and vice versa); if gas pre-conditioning was required; if additional power was required; siting (i.e., where to install the HEPA filtration systems and if reconfiguration of current equipment was required); and initial and ongoing costs of installing three HEPA filtration systems.

After completing its extensive analysis, AFW concluded:

> HEPA filters have been used on combustors that feed mixed or radioactive waste material due to the need of eliminating radioactive particulate to extremely low levels. However, ***Amec Foster Wheeler is not aware of any commercial industrial hazardous waste incinerators that employ the use of HEPA filters***. Therefore they are not proven in this application and are not industry accepted standard. As shown by the operating data for these units, HEPA filters are not required as a control method to meet HWC standards.

Exhibit B at 3 (emphasis supplied). AFW pointed out that Veolia's emissions of particulate matter, as well as low volatile and semi-volatile metals, as demonstrated under worst case operating conditions during CPTs, are 5 to 10 times lower than the HWC emissions standards. *Id.* at 1. Thus, according to AFW, "[t]his indicates a superior level of control with no further treatment required." *Id.*

It is evident that the current primary control devices for particulate matter (i.e., baghouses) function extremely well on all three incinerators. Even if there were a failure of any component of the baghouse systems that resulted in elevated particulate matter emissions, currently installed instrumentation (bag leak detectors and opacity monitors) would detect that failure. Since the outputs from these instruments are included in the automatic waste feed cut-off systems on all three incinerators, elevated instrument readings would trigger all waste feeds to stop automatically and corrective action to be initiated.

AFW also considered the possible repercussions HEPA filter installation could have on the entire combustion system and concluded:

> Additionally, increasing the total pressure drop through the incineration system makes it more difficult to control the small draft pressure required at the front of the incinerator. If the draft pressure is too negative, the complete combustion of the waste is compromised by excessive leakage of air into the incinerator. But if the pressure goes positive, partially combusted, hot gas (that has not been scrubbed) can be emitted at ground levels where it is much more hazardous to personnel at the plant and results in emission of multiple pollutants at levels above HWC standards.

Exhibit B at 3. Thus, adding this equipment would likely compromise the overall combustion efficiency of the incinerators and could present a safety hazard to plant personnel.

The estimated installed cost for HEPA filtration systems on incinerators 2 and 3 is $642,000 each. For incinerator 4 the installed cost is $1,177,000. This is a total estimated cost of $2,460,000 for all three units. Additionally, annual filter replacement is estimated to cost $95,000, not including labor costs. Increased electrical usage will also be realized due to the required booster fan operation on each incinerator and is estimated to cost $71,000 annually.

AFW concluded that siting the HEPA equipment for integration into Veolia's existing systems for all three incinerators would be extremely challenging and therefore did not attempt to assign an estimated cost to the relocation of Veolia's existing infrastructure. However, based on conversations with the AFW engineers that toured Veolia's facility, several existing buildings/structures may need to be moved in order to accommodate the HEPA equipment, including one of the main employee facilities (which houses offices, incinerator control system equipment, and employee locker room/lunch room facilities), electrical power supply equipment located within close proximity of the incinerators, and/or a large amount of current incineration equipment. Although relocation of existing facilities is not included in the cost estimate, it is

clear that these costs would be prohibitive. Further, installation of the filters would require a total shutdown of each of the incinerators for several weeks.

In sum, taking into account the incinerators' exemplary performance under worst case conditions (i.e., during CPTs), the high costs involved with the installation and replacement of HEPA filters, and the likely negative combustion ramifications with the installation of HEPA filters, Veolia believes that there is a number of fatal flaws associated with the concept of adding HEPA filtration to its pollution control system and therefore cannot agree with installation of this equipment.

*4. Proposal for the Installation of Mercury CEMS*

As we discussed, mercury CEMS have never been utilized continuously on any commercial hazardous waste incinerator in the United States. While the Agency speculates that a mercury CEMS could work in such an environment, Veolia believes, based upon Veolia's experience in operating its commercial hazardous waste incinerators, that the high moisture, high temperature environment found in the incinerators make the mercury CEMS technology likely to fail. It will only succeed, if ever, by Veolia incurring much time and expense attempting to force the technology to successfully operate.

USEPA's own evaluation of the use of mercury CEMS in coal-fired power plants supports Veolia's concerns. On November 29, 2006, USEPA published a report regarding the results of a long-term evaluation of mercury CEMS in a coal-fired power plant. *See* USEPA, Long-Term Field Evaluation of Mercury (Hg) Continuous Emission Monitoring Systems: Coal-Fired Power Plant Burning Eastern Bituminous Coal, attached hereto as Exhibit C, hereinafter "CEMS Report". The CEMS Report detailed the performance of the mercury CEMS in the homogenous and consistent environment produced by a coal-fired boiler. Of the many findings, the Agency reported that the CEMS struggled with obtaining a consistent sample:

> The most commonly observed problems related to either physical plugging of the probe during sample transfer or fouling of the converter. Often it would take some time for this type of problem to be evident. In some cases, more than one attempt was necessary to meet performance criteria and system maintenance was required.

Exhibit C at 6-1 (emphasis added). Moreover, USEPA concluded that "[t]his test program demonstrated that the ***source characteristics*** can have a significant effect on Hg CEMS performance." *Id.* (emphasis added). This is an important and critical finding for the prospects of installing a mercury CEMS at Veolia, because, in contrast to Veolia, a coal fired power plant presents lower moisture, lower temperatures and a relatively homogenous feed, with few variations in the mercury levels. Yet, despite this comparatively friendly environment, the mercury CEMS still experienced multiple failures.

USEPA produced the CEMS Report from a government funded "test program" where "much was learned" concerning the operation and capabilities of the mercury CEMS technology. *See id.* However, Veolia does not have unlimited funds to spend on a "test program." In the competitive world of commercial hazardous waste incineration, Veolia's installation of one mercury CEMS (much less three mercury CEMS) for five years places Veolia at a significant competitive disadvantage. Veolia's concern about the competitive disadvantage is heightened given that USEPA experienced significant operational problems when USEPA used the mercury CEMS in a comparatively friendlier environment.

In the CEMS Report, USEPA provided a methodology for how a potential purchaser of a mercury CEMS could responsibly evaluate mercury CEMS technology at its facility. Specifically, the Agency set forth the following factors for those considering installing mercury CEMS:

- Potential purchasers should review available mercury CEMS performance testing data obtained from sources similar to their own.

- Potential purchasers should ask vendors to provide specific experience, including ongoing improvements that the vendor has made as a result of their experience at similar sources.

- A mercury CEMS considered for purchase should be operated on-site for six months to demonstrate its capability to perform (reliability and accuracy) under the site-specific conditions before acceptance.

- The above criteria should be part of a performance warranty agreement.

Exhibit C at 6-1 to 6-2. Veolia agrees with these recommendations. Unfortunately, many of USEPA's recommendations cannot be followed given the facts in this case. For instance, there is no available mercury CEMS performance testing data from sources similar to Veolia. Likewise, vendors cannot provide Veolia with specific experience at similar sources since no sources with similar source characteristics to a commercial hazardous waste incinerator exist. The mere fact that many of USEPA's recommendations cannot be followed because the mercury CEMS has never been tested or used in a similar environment indicates that USEPA's application of mercury CEMS to a commercial hazardous waste incinerator is premature.

Veolia continues to believe that it is unjustifiably being singled out for the installation of mercury CEMS. Further, Veolia is concerned that installation of such a monitor would indicate to its customers and the community that there is a "problem" at Veolia that does not exist. However, in an effort to improve mercury CEMS technology to a point that it could be successfully implemented through rulemaking as an industry standard, Veolia is willing to partner and cooperate with USEPA to perform a demonstrative test of the mercury CEMS that could provide the practical and technical basis for future Agency decision-making and rulemaking.

Therefore, in light of these facts, Veolia will agree to work with the Agency to create a data collection program where Veolia will install a single mercury CEMS on the incineration unit of the Agency's choice to be operated for a single 60 day period. The technical details of this data collection program will be worked out with the appropriate Agency personnel to ensure that USEPA may collect quality-assured continuous emission data over the collection period. Veolia will retain an environmental contractor with experience in operating mercury CEMS to operate and maintain the mercury CEMS. Veolia has received a budgetary estimate of $125,000 per month to install and operate such a mercury CEMS, and to assist in final report generation. Veolia, USEPA, and the environmental contractor will develop a specific plan that will provide the parameters of installation, operation, and data reporting; however, Veolia's willingness to enter into this project with the Agency is contingent on the data collected by the mercury CEMS not being used for compliance and enforcement purposes, which is consistent with the technology-forcing nature of this data and the purposes of the program. Veolia will provide the collected data to the Agency in a final test report within a reasonable timeframe after the completion of the test period.

*Conclusion*

Veolia requests that the issuance of the renewed Title V permit bring to a close any and all existing issues between Veolia and the USEPA. It is Veolia's desire to partner with USEPA to develop and advance technology while remaining a highly-valued member of our community. To be clear, Veolia will provide comments on any draft permit but will not appeal the final permit if the final permit decision embraces Veolia's proposal as set forth herein.

In sum, Veolia appreciates USEPA's willingness to work with Veolia towards a successful resolution of this matter and hopes that the points set forth above are acceptable to the Agency. Veolia is willing to meet with the Agency, at its convenience, if necessary to discuss and finalize the Title V permit conditions.

Please contact me with any questions.

Sincerely,

Doug Harris

Doug Harris
General Manager

Enclosures

cc: George Czerniak

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